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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,623	05/25/2007	Masataka Minakawa	Q97476	5249
23373	7590	03/26/2010	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			KNABLE, GEOFFREY L	
			ART UNIT	PAPER NUMBER
			1791	
			NOTIFICATION DATE	DELIVERY MODE
			03/26/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/594,623	<b>Applicant(s)</b> MINAKAWA, MASATAKA	
	<b>Examiner</b> Geoffrey L. Knable	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: ____.  |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :9/28/2006; 3/23/2009; 6/18/2009.

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1. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In the first line of each of claims 1-12, reference is made to “pivotably driving”. It however is not clear what is meant by “pivotably driving” in the context of the present invention and as such, it is not clear what additional requirement is added by this phrase. Clarification is required.

In claim 1, line 3, reference is made to the endless path consisting of “a pair of inner and outer endless rails”. This would seem to require a pair of inner rails and a pair of outer rails whereas it seems that this may not be what is intended. Clarification is therefore required of this apparent inconsistency. The same ambiguity is present in claim 10.

In the last line of claim 4, “as well as is disengaged” is grammatically awkward and confusing.

In claim 5, it is not clear what direction is “outward”.

In claim 5, no antecedent has been established for “the original position”.

In claim 6, no antecedent has been established for “the engagement/disengagement of the carriage with the carrier”.

Claim 7 is directed to a device for implementing the claim 1 method but the claim does not clearly define the scope of the claimed device. It is thus not clear exactly what apparatus features are required by this claim, especially as regards the apparatus features mentioned in claim 1. It is assumed that this claim requires the inner and outer

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endless rails, carriage and carrier operable as defined in claim 1 but clarification is required of the scope of the device.

The last two lines of claim 11 are indefinite and confusing, the phrase "each of the positions backside of the entrance and front of the exit" being awkward and confusing.

The ambiguity in assessing the scope of claim 7 is amplified in claim 12 which refers to some of the features defined in claim 1 but does not indicate whether it is in reference to (and thus further defining) the same features or is introducing new features.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Christensen (US 3,662,906).

Christensen discloses a method of driving a carriage (20) on rails (22) in an oval shaped endless path (fig. 1) using a carrier (24) that tows the carriage around the path including the curved portions. Christensen therefore anticipates claim 1. As to claim 3, engagement pin "26" engages the carrier from the carriage and positioning pin (e.g. pin

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in cylinder 38) engages the carriage from the ground side, the cylinder 38 moving its pin while the engagement pin (26) is engaged with the carrier. As to claim 5, the carrier (24) will return to its original position with each circuit.

5. Claims 2, 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (US 3,662,906) as applied above, and further in view of Bowman, Jr. (US 3,951,484).

As to claim 2, Christensen provides the carrier (24) as a chain but does not detail its construction. It however is well known and obvious to use roller chains to engage and drive a tow carriage - Bowman, Jr. is exemplary. This would also render the claim 7 device obvious as Bowman, Jr. also evidences it to be a known and conventional configuration for a roller tow chain to have the rollers thereof with vertical axes. As to claim 10, the particular location of the drive for the chain would have been readily and routinely selected by the artisan for only the expected and predictable results, Bowman, Jr. also illustrating a drive close to the chain axis.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (US 3,662,906) taken in view of Bowman, Jr. (US 3,951,484) as applied above, and further in view of and Galloway et al. (US 3,590,744).

To include a supporting roller for each link in a tow chain would have been obvious in view of Galloway et al. which teach providing wheels to help reduce friction - note esp. wheels 70 and col. 3, lines 5-6.

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7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (US 3,662,906) taken in view of Bowman, Jr. (US 3,951,484) as applied above, and further in view of Hajcak, Jr. (US 4,664,036).

To include a wear resistant resin at least inside of the curved portions would have been obvious in view of Hajcak, Jr. which suggest such for a similar drive tow chain - e.g. note the abstract and figures.

8. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Ostling et al. (US 1,964,363).

Ostling et al. discloses a method of driving a carriage (22) on rails (18) in an oval shaped endless path (fig. 2) using a carrier (chain 21) that tows the carriage around the path including the curved portions. Ostling et al. therefore anticipates claim 1. As to claim 5, the carrier will return to its original position with each circuit.

9. Claims 2, 7, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ostling et al. (US 1,964,363) as applied above, and further in view of Bowman, Jr. (US 3,951,484).

As to claim 2, Ostling et al. provides the carrier (21) as a chain but does not detail its construction. It however is well known and obvious to use roller chains to engage and drive a tow carriage - Bowman, Jr. is exemplary. This would also render the claim 7 device obvious as Bowman, Jr. also evidences it to be a known and conventional configuration for a roller tow chain to have the rollers thereof with vertical axes. As to claim 10, Ostling provides the drive for the chain between the rails (esp. fig. 6). As to claim 12, Ostling et al. discloses the conveying system in a tire building

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system with multiple workstations along the straight parts of the oval path with carriages movable to the workstations.

10. Claims 3, 4, 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (US 3,662,906) alone or (for claim 11) further in view of Bowman, Jr. (US 3,951,484), as applied to claims 1/7 above, and further in view of at least one of [Tegel (US 6,758,320) and Stalker (US 3,968,869)].

To additionally include carriage locking/positioning means (e.g. pins) that operate from the ground side and operate cooperatively with the feed pins, would have been obvious in view of Tegel (e.g. abstract) and Stalker (e.g. col. 1, lines 6-15) which evidence it to be known and desirable to be able to accurately locate a carriage moving among workstations, this conventionally including use of pins that operate from the ground side to engage the carriage for accurate location thereof - only the expected and predictable results would have been achieved. As to use of cylinders, Christensen provides a cylinder (38) to actuate the engagement pins but this is not part of the carriage. To provide such as part of the carriage would however have been seen to have been an obvious alternative as a desired tradeoff between complicating the carriage versus simplifying the pin actuation - only the expected and predictable results would have been achieved.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.



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Linton et al. (US 4,924,777) discloses a conveyor system where tow carriages are stopped and disengaged from a chain at the entry/exit to curved sections but is at present no more relevant than the applied prior art.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Geoffrey L. Knable/  
Primary Examiner, Art Unit 1791

G. Knable  
March 23, 2010